



## CIRM grantee Robert Blelloch wins ISSCR Outstanding Young Investigator Award

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CIRM grantee Robert Blelloch of the University of California, San Francisco won the 2011 Outstanding Young Investigator Award from the International Society for Stem Cell Research. The society's annual meeting is taking place now in Toronto.

Blelloch presented his research June 15 at 6pm and will participate in a press briefing at noon June 16. His work focuses on the role of small molecules called microRNAs and their role in stem cell biology and cancer.

Jennifer O'Brien described Blelloch's work in a press release from UCSF:

During the last few years, Blelloch's team has reported several key findings. In 2008, they reported that microRNAs promote self renewal of embryonic stem cells in mice (Nature Genetics, 2008). In 2009, they showed that when those same microRNAs were inserted into adult cells the cells de-differentiated back into embryonic stem cells (Nature Biotechnology, 2009). In 2010, they inserted a microRNA into embryonic stem cells and promoted differentiation, but determined that the microRNA had to compete with microRNAs that promote embryonic stem cell self-renewal (Nature, 2010). This year, his laboratory has been looking at microRNAs as a potential tool to systematically dissect the molecular pathways that regulate cell fate transitions, including dedifferentiation of adult cells to create induced pluripotent stem cells (Nature Biotechnology, 2011).

"People have come to realize microRNAs are remarkably powerful," said Blelloch, associate professor in the Departments of Urology, Obstetrics, Gynecology and Reproductive Sciences and Pathology and a member of the Helen Diller Family Comprehensive Cancer Center.

Using microRNAs for therapeutic purposes has great potential, he said. "They could be used either to induce adult cells to dedifferentiate to embryonic stem cells, which could be expanded, manipulated and returned to a patient, or to promote differentiation of embryonic stem cells to produce tissues that would remain integrated in the body once re-introduced." They also could be used to target cancers, and they attract interest from biotechnology companies.

Blelloch has a SEED Award and a New Faculty II Award, both looking at the role of microRNAs in embryonic stem cell biology. Not to blow our own horn, but CIRM does know how to pick high quality research. Last year Stanford's Joanna Wysocka won the same award. She has a SEED Award and a New Faculty I Award from CIRM.

A.A.

Tags: Wysocka, Stanford University, SEED, New Faculty, ISSCR, Blelloch, University of California San

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